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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,796	11/25/2003	Phui Qui Nguyen	FA1216USNA	8238

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E I DU PONT DE NEMOURS AND COMPANY
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WILMINGTON, DE 19805

EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/722,796

Applicant(s)

NGUYEN ET AL.

Examiner

Elena Tsouy

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 February 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-10.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See attached.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.

Advisory Action

1. The Request for Reconsideration filed on 2/21/2006 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance for the reasons of record set forth in the Final Office Action mailed on 11/21/2005.

Response to Arguments

2. Applicants' arguments filed 2/21/2006 have been fully considered but they are not persuasive.

(A) Applicants argue that Mizutani et al. is not directed to moisture curing, even if alkoxysilane groups are present (see column 4, lines 3-16). When alkoxysilane groups are present in the coatings of Mizutani et al, the alkoxysilyl equivalent weight is greater than 650, with a most preferred alkoxysilyl equivalent weight of about 1500 (see column 4, lines 3-6). If, however, too many alkoxysilyl groups are present, the alkali resistance of the coating film would be adversely affected due to the formation of Si-O-Si linkages upon curing, and the coating composition would tend to gel when exposed to moisture (see column 4, lines 9-15). This also applies to the silicone polyol. Thus, moisture curing should be avoided in the coating compositions of Mizutani et al.

The Examiner respectfully disagrees with this argument. Trialkoxysilyl groups are moisture curable *inherently*. Therefore, if trialkoxysilyl groups are **introduced** into a resin, moisture curing of the resin with the formation of Si-O-Si linkages **could not be avoided** unless the resin is always kept in dry atmosphere. However, Mizutani et al do not teach that the resin should always be kept in dry atmosphere. Mizutani et al only require that the alkoxysilyl

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equivalent weight should be greater than 650 to avoid the formation of (too many) Si-O-Si linkages which would adversely affect the alkali resistance of the coating film.

(B) Applicants reiterate that Wu et al. only states the well-known principle that radical polymerization can occur by heat. Because nothing in Mizutani et al. indicates that the coating compositions therein are cured by radical polymerization, and Wu et al. does not make clear that the missing descriptive matter is necessarily present in Mizutani et al, see MPEP § 2112(IV), Wu et al. is simply inapplicable to the present invention.

The Examiner respectfully disagrees with this argument. Mizutani et al apply heat for curing a resin having carbon-carbon bonds. It is irrelevant whether Mizutani et al. indicates that the coating compositions are cured by radical polymerization or not, because it is well known in the art that carbon-carbon bonds undergo radical polymerization under the heat, as evidenced by Wu et al.

(C) Applicants argue that Gaglani does not disclose automobile coatings, but rather is directed to the coating of circuit boards. The mere fact that a circuit board may be in an automobile, a fact Applicants do not dispute, does not automatically mean that a circuit board is a "vehicle part" within the scope of Applicants' specification. Claim terms must be given their broadest reasonable definition. MPEP § 2111. Further, the plain meaning of a claim term "refers to the ordinary and customary meaning given to the term by those of ordinary skill in the art." Id. § 2111.01(II). The Examiner's overly broad definition of vehicle part is simply inconsistent with how one of ordinary skill in the art would read Applicants' specification. As is known to one of ordinary skill in the art the relevant art being vehicle coatings-coating a vehicle is coating the body of the vehicle. Logically flowing from this fact is that a vehicle pad is a bodypart.

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Because a circuit board is not a body part, the Examiner's definition of vehicle part is unreasonably broad. Consequently, Gaglani is inapplicable to Applicants' claimed invention.

The Examiner respectfully disagrees with this argument. First of all, the specification as filed does not limit "vehicle part" to "a body part". Consequently, plain and broad meaning of a claim term refers to *any* vehicle part including vehicle circuit board. Secondly, It is held that a **recitation of the intended use** of the claimed invention must result in a **structural difference** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Therefore, since the Caglani's structure is capable of performing the intended use, then it meets the claim.

(D) Applicants maintain that Murase is directed solely to powder coatings. The Examiner relies on a single statement in Murase at column 1, lines 21-27, as support for the argument that Murase discloses more than powder coatings. Use of this statement to prove that Murase teaches more than powder coatings is completely fallacious. The statement in Murase is merely an acknowledgement of what anyone of ordinary skill in the art knows-namely, that the usual procedure in the coatings field in general, and vehicle coatings in particular, is to coat a substrate with different (more than one) coating layers. What Murase does teach, as evidenced throughout the entire disclosure, is powder coating compositions for forming multi-layer coatings (see, e.g., column 1, lines 5-10; column 2, lines 21-27; column 2, lines 28-31; column 2, lines 34-46). Consequently, Applicants reiterate their position from their June 20, 2005, Response to Non-Final Office Action, namely that there is no disclosure, suggestion, or motivation within Murase to modify Gaglani to produce multi-layer automotive coatings.

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The Examiner agrees with Applicants that Murase was applied for mere acknowledgement of what the anyone of ordinary skill in the art knows - namely, that when metal, wood, plastics or other substrates are coated for decorative or protective purposes with usual coating compositions including powder coating compositions, the usual procedure in the coatings field in general, and vehicle coatings in particular, is to apply at least two coating compositions of different properties in a plurality of coats than to repeatedly apply a single composition to the desired thickness, where in the former case, the ground coat can be formed from a composition having high adhesion to the particular substrate and other desirable properties such as corrosion resistance, whereas the top coat to be exposed to the atmosphere can be prepared from another composition having, for example, the desired color, gloss, abrasion resistance, photochemical stability, impermeability to chemicals, chemical or physical stability or other properties.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied clear or pigmented coating composition of Gaglani repeatedly over substrates since Murase teaches that a single composition can be applied repeatedly to substrates to provide the desired thickness of protective coating; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied clear or pigmented coating composition of Gaglani over primed substrates with the expectation of providing the desired high adhesion to the particular substrate and other desirable properties, as taught by Murase.

(E) Applicants also maintain that their claimed invention is patentable over Gaglani in view of Maag et al. The UV-curable polyurethane(meth)acrylate binders disclosed in Gaglani

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which have alkoxysilane groups are not included in the Maag et al. definition of binders. The binders of Maag et al are thermally curable by addition or condensation. One of ordinary skill in the art knows that thermal curing is a reaction between complementary functional groups. Maag et al. explain this reaction in further detail at column 4, line 45- column 5, line 53. By contrast, when curing the alkoxysilane groups in the binders of Gaglani, as well as the alkoxysilane groups in Applicants' claimed invention, water (e.g., humidity) is needed to initiate the reaction. This reaction is moisture curing. Applicants describe this process in relation to the claimed invention noting that moisture curing occurs by means of hydrolysis, followed by a subsequent condensation of alkoxysilane groups (see page 4, line 34 - page 5, line 2). Addition of water to alkoxysilane groups (Si-OR) leads to the formation of silanol groups (SiOH) and subsequent condensation of silanol groups leads to siloxane bridges (Si-O-Si). In other words, moisture curing is a hydrolysis reaction (i.e., a reaction with water), whereas condensation is a reaction where water is formed as a side-product.

The Examiner respectfully disagrees with this argument. First of all, claims were rejected over Maag et al in view of Gaglani NOT over Gaglani in view of Maag et al. The second curing mechanism described at column 4, line 63 – column 5, line 53 of Maag et al is NOT a polycondensation or addition reaction between complementary reactive functional groups. Instead, Maag et al teach that in the systems curable by **condensation** reactions (See column 4, lines 63-66) **NO restrictions** apply to the binder (See column 5, lines 7-8). Therefore, a UV-curable polyurethane (meth)acrylate binder of Gaglani having alkoxysilane groups which are cured by **condensation** upon exposure to moisture would be a suitable binder of Maag et al.

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Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a coating composition of Gaglani as a clear lacquer coating composition in Maag et al with the expectation of providing the desired cure of exposed areas under UV radiation and complete cure of shadow areas under conditions of ambient temperature and humidity, as taught by Gaglani.

(F) Applicants state that the OH groups mentioned in Bergstrom et al. are silanol groups not hydroxyl groups.

The Examiner respectfully disagrees with this argument. One of ordinary skill in the art knows that OH groups are hydroxyl groups no matter to what atoms they are linked. For example, silanol groups are hydroxyl groups only linked to Si atom.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy
Primary Examiner
Art Unit 1762

ELENA TSOY
PRIMARY EXAMINER
ETsoy

February 27, 2006